

EMULSION POLYMERS COUNCIL, INC.

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July 7, 2008

Dr. Ruth M. Lunn
National Institute of Environmental Health Sciences
P.O. Box 12233, MD EC-14
Research Triangle Park, NC 27709
Via E-mail: lunn@niehs.nih.gov

Re: Comments on NTP Draft Background Document for Styrene

Dear Dr. Lunn:

The Emulsion Polymers Council (EPC) appreciates the opportunity to provide comments on the National Toxicology Program's (NTP) "Report on Carcinogens Draft Background Document for Styrene," as announced in the May 20, 2008 *Federal Register* (73 Fed. Reg. 29139) and scheduled for peer review on July 21-22, 2008. EPC is comprised of the major North American manufacturers of emulsion polymers, including: BASF Corporation; Celanese Emulsions; The Dow Chemical Company; Dow Reichhold Specialty Latex LLC; Eastman Chemical Company; The Lubrizol Corporation; Reichhold, Inc.; Rohm and Haas Chemicals LLC; and Wacker Polymers. Many of the emulsion polymers produced by EPC members contain styrene.

In response to the draft NTP report and for your consideration at the July 21-22 Expert Panel meeting, we are submitting the attached "Comments on NTP Styrene Epidemiology Review," as prepared by Dr. Jane Teta of Exponent, Inc. The attached report offers several important recommendations that we believe the NTP and the Expert Panel should consider in their review of the epidemiology data:

Recommendations:

- NTP should reconsider its approach to the interpretation of this body of evidence, including focusing on findings in the reinforced plastics industry. Findings that should be given the greatest weight are those that show a strong association with styrene exposure, are statistically significant, are consistent across a number of studies, show a dose-response effect, and are seen in the largest of the studies in the reinforced plastics industry. Merely listing weakly positive, nonsignificant and imprecise estimates based on small numbers should be avoided.
- The NTP report acknowledges that, "[t]he evidence for lymphohematopoietic malignancies appears to be the strongest in the styrenebutadiene industry ... Findings for lymphohematopoietic cancers from studies in the reinforced plastics industry were less consistent." The NTP report should acknowledge that the

authors of studies in the styrene butadiene rubber industry have suggested that the exposure most strongly associated with the excess risk of leukemia was butadiene, not styrene. Since findings from the reinforced plastics industry also do not support an association with styrene (especially if the Danish cohort is only counted once), the NTP report should conclude that the current data do not support this association.

- The NTP report should note that the elevations seen for pancreas cancer are not observed consistently across all studies of styrene workers and that they are more likely to be seen in short-term workers; thus, these findings are unlikely to be due to styrene exposure and more likely to be due to confounding or associated with lifestyle factors such as smoking and alcohol consumption.
- The NTP report should discuss the possible role of confounding factors in elevated risks and evaluate whether confounding is a more likely explanation than styrene, particularly in short-term workers.
- For completeness, the NTP report should acknowledge the existence of other studies that mention styrene as a possible risk factor, but exclude them from the overall evaluation for the above-cited reasons.

We appreciate your attention to this important issue.

Respectfully Submitted,

Andrew Jaques
Senior Executive